

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION TYPE CERTIFICATE DATA SHEET E10NE	TCDS NUMBER E10NE REVISION: 4* DATE: March 23, 2007 WYTWORNIA SPRZETU KOMUNIKACYJNEGO (WSK) "PZL-KALISZ" MODELS: ASz-62IR-16 ASz-62IR-M18/K9-BA ASz-62IR-M18 ASz-62IR-M18/K9-BB
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Engines of models described herein conforming with this data sheet (which is part of Type Certificate Number E10NE) and other approved data on file with the Federal Aviation Administration, meet the minimum standards for use in certificated aircraft in accordance with pertinent aircraft data sheets and applicable portions of the Federal Aviation Regulations, provided they are installed, operated, and maintained as prescribed by the approved manufacturer's manuals and other approved instructions.

TYPE CERTIFICATE (TC) HOLDER Wytwornia Sprzetu Komunikacyjnego "PZL-KALISZ" S.A.
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 62-800 Kalisz
 Poland

I. MODELS	ASz-62IR-16	ASz-62IR-M18	ASz-62IR-M18/K9-BA ASz-62IR-M18/K9-BB
TYPE	9RA, .687:1 reduction gears / clockwise rotation of crankshaft and propeller shaft (viewed from rear), single-speed supercharger.		
RATINGS			
Maximum continuous hp, r.p.m., in. Hg., at:			
Critical pressure altitude (ft.)	812-2100-35.4-4920	--	954-2150-41.3-4920
Sea level pressure altitude	793-2100-35.4-S.L	--	917-2150-41.3-S.L.
Takeoff (5 min.) hp, r.p.m., in. Hg., at:			
Sea level pressure altitude	967-2200-41.3-S.L	--	1000-2200-45.2-S.L.
FUEL			
Minimum grade aviation fuel	Aviation gasoline 91 octane	--	--
LUBRICATING OIL	Mineral aircraft engine oils with a nominal viscosity of 20 cSt at 100°C or 100 SUS at 210°F and a minimum viscosity index of 80. Also refer to the Installation Manual.	--	

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LEGEND: "- ." INDICATES "SAME AS PRECEDING MODEL"
 "----" NOT APPLICABLE

NOTICE: ALL PAGES ARE REFORMATTED. SIGNIFICANT CHANGES, IF ANY
 ARE BLACK-LINED IN THE LEFT MARGIN.

I. MODELS (Continued)	ASz-62IR-16	ASz-62-IR-M18	ASz-62IR-M18/K9-BA /K9-BB
COMPRESSION			
Bore and stroke, in.	6.10 X 6.87	--	--
Displacement, cu. in.	1823	--	--
Compression ratio	6.4:1	--	--
WEIGHT (Max.dry) (lb)	1302	1274	1280
CENTER OF GRAVITY (in)			
Aft of cylinder centerline	0.75	0.55	--
Above crankshaft centerline	0.45	0.51	--
CRANKSHAFT DAMPERS	Two mobile counterweights, 4.5 order, on rear arm of crankshaft.		
PROPELLER SHAFT	Spline	--	--
CARBURETION	AKM-62IRA	--	--
FUEL PUMP	BNK-12BK	--	--
IGNITION	Two BSM-9 or BSM-9F Magnetos	--	--
IGNITION TIMING, °BTDC			
Right	20° ± 0.5°	--	--
Left	15° ± 0.5°	--	--
SPARK PLUGS	Eighteen SD-48BSM or equivalent	--	--
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CERTIFICATION BASIS

FAR 21.29 and FAR 33, including amendments 1 through 6.

Type Certificate E10NE issued/revised:

<u>Model</u>	<u>Date of Application</u>	<u>Date of TC issued/revised</u>
ASz-621R-16	02/02/79	12/16/80
ASz-621R-M18	02/02/79	12/16/80
ASz-621R-M18/K9-BA	09/09/00	10/19/01
ASz-621R-M18/K9-BB	09/09/00	10/19/01

The General Inspectorate of Civil Aviation of Poland originally type certificated this engine. The FAA validated this product under U.S. Type Certificate Number **E10NE**. Effective September 28, 2003, the European Aviation Safety Agency (EASA) began oversight of this product on behalf of Poland.

PRODUCTION BASIS

FAR 21.500 for production of engines or replacement parts under this type certificate by WSK "PZL-KALISZ" under control of the Republic of Poland General Inspectorate of Civil Aviation (GICA).

IMPORT REQUIREMENTS

To be considered eligible for installation on U.S. registered aircraft, each new engine to be exported to the United States with the General Inspectorate of Civil Aviation of Poland or EASA airworthiness approval shall have a Joint Aviation Authorities (JAA) or EASA Form 1, Authorized Release Certificate. The JAA or EASA Form 1 should state that the engine conforms to the type design approved under the U.S. Type Certificate **E10NE**, is in a condition for safe operation and has undergone a final operational check.

Additional guidance is contained in FAA Advisory Circular 21-23, Airworthiness Certification of Civil Aircraft, Engines, Propellers, and Related Products, imported into the United States.

NOTES

NOTE 1.

Maximum permissible temperatures are as follows:

Cylinder head**Oil Inlet**

(gasket type thermocouple)	203°F max. 3 minutes for oil viscosity 120 SUS at 210°F
475°F max. 15 minutes	185°F max. 3 minutes for other oil types
410°F no time limit	167°F no time limit

NOTE 2.

Fuel and oil pressure limits

	<u>Max</u>	<u>Min</u>
Fuel Pressure (psi)		
at rated power	4.97	3.55
at idle	---	2.13
Oil pressure		
at rated rpm	71.7	56.9
at idle	---	21.3

NOTE 3.

The following accessory provisions are available:

ACCESSORY	ASz-62IR-16	ASz-62IR-M18 -M18/K9-BA and -M18/K9-BB	Rotation	Speed Ratio to Crankshaft	Maximum Torque ft. lb.	Maximum Overhang Moment ft. lb.
Starter RIM-U-24IR	X	X	CC	1:1	795	17.0
Magneto BSM-9 or BSM-9F	X	X	CC	1.125:1	2.21	2.93
Carburetor AKM-62IRA	X	X	---	---	---	---
Fuel Pump BNK-12BK	X	X	CC	1:1	1.45	0.44
Oil Pump MSz-8M	---	X	C	1.125:1	5.21	1.45
Oil Pump MSz-8A+filter	X	---	C	1.125:1	7.09	9.40
Centrifugal filter TCM-25	X	---	C	3.345:1	1.30	1.81
Propeller governor R-9SM2	X	X	CC	1.114:1	2.60	---
Generator GSN-3000M	XX	XX	C	2.52:1	10.56	8.90
Piston Air Compressor AK-50P-12	XX	---	C	0.825:1	4.70	1.30
Hydraulic Pump PLT-2-3 or LUN6102.01-8	---	XX	C	2.17:1	6.00	0.94
Hydraulic Pump PLTZ-15	---	XX	C	2.17:1	2.9	1.16
Hydraulic Pump PLTZ-15	---	XX	CC	1.78:1	43.40	4.12
Vacuum Pump 212CW	---	XX	CC	1.78:1	1.23	0.293

NOTE 3.(continued)						
ACCESSORY	ASz-62IR-16	ASz-62IR-M18 -M18/K9-BA and -M18/K9-BB	Rotation	Speed Ratio to Crankshaft	Maximum Torque ft.lb.	Maximum Overhang Moment ft.lb.
Hydraulic Pump PZ-5TC	---	XX	C	0.825:1	---	0.72
Hydraulic Pump 1P-582	---	XX	C	1.6986:1	9.4	1.31
Vacuum Pump 3P-207	---	/K9-BA only XX	CC	1.787:1	---	1.13
"X" Standard accessory "XX" Optional accessory "C" clockwise/facing drive pad "CC" counter-clockwise						

NOTE 4. The ASz-62IR-M18,-M18/K9-BA and -M18/K9-BB do not include provisions for an oil sump metal-chip detector.

NOTE 5. Engine rating basis:

Ratings are based on static sea level standard conditions of dry inlet air at 59°F and 29.92 in. Hg., with no aircraft accessory drive loads. Production engines conforming with this type certificate must be capable of producing not less than 100 percent rated power at rated rpm and manifold pressure.

NOTE 6. Starter, aircraft accessories, propeller, and engine oil not included in engine weight.

NOTE 7. Time Between Overhaul (TBO) is presented in the GICA (CACA) - approved ASz-62IR engine manuals.

NOTE 8.

SERVICE INFORMATION:

Each of the documents listed below must state that it is approved by the European Aviation Safety Agency (EASA) or, for approvals made before September 28, 2003 by the General Inspectorate of Civil Aviation of Poland. Any such documents including those approved under a delegated authority, are accepted by the FAA and are considered FAA approved.

- Service bulletins,
- Structural repair manuals,
- Vendor manuals,
- Aircraft flight manuals, and
- Overhaul and maintenance manuals.

These approvals pertain to the type design only.

NOTE 9.

These models incorporate the following characteristics:

<u>Model</u>	<u>Characteristics</u>
ASz-62IR-16	Basic model which includes an electric metal chip detector in the oil sump.
ASz-62IR-M18	Similar to basic model except for the absence of the chip detector and cylinder head and inter-cylinder air deflectors, and modified accessory gearbox drives.
ASz-62IR-M18/K9-BB	Similar to basic model except for a power increase resulting from an increase of the supercharger drive ratio from 7:1 to 8.325:1, absence of the chip detector and cylinder head and inter-cylinder air deflectors, and modified accessory gearbox drives.
ASz-62IR-M18/K9-BA	Similar to K9-BB except for inclusion of cylinder head and inter-cylinder air deflectors and modified accessory gearbox that is adapted for hydraulic pump 1P-582 or vacuum pump 3P-207.

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